

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently Amended) A method for authenticating an electronic payment
2 comprising:
3 receiving from a seller an electronic sales draft including an electronic signature,
4 said electronic sales draft being digitally signed using a private key associated with a public key;
5 receiving from said seller a digital certificate associated with a buyer, said digital
6 certificate including a first verification key and an encrypted version of a personal identification
7 number (PIN), said digital certificate including a binding between at least a portion of said
8 financial account datum and said public key using a second verification key associated with a
9 trusted party performing said binding;
10 using said first verification key to verify that said electronic signature was
11 authorized by said buyer;
12 extracting said encrypted version of said PIN from said digital certificate;
13 decrypting said encrypted version of said PIN using said second verification key
14 or a key associated with said second verification key, thereby verifying said first verification key
15 was bound using said second verification key by said trusted party that performed said binding;
16 generating, using said PIN, an authorization request; sending said authorization
17 request to a financial institution; receiving an approval of said authorization request from said
18 financial institution; and sending said approval to said seller.

1 2. (Currently Amended) A method for authorizing an electronic purchase in a
2 networked computer environment, comprising the steps of:
3 (a) receiving, from a merchant, a transaction authorization request including a
4 digital certificate passed through said merchant from a user involved in said transaction; and a

5 transaction order that was digitally signed by said user using a private key associated with a
6 public key,

- 7 (i) said digital certificate including a financial account datum
8 associated with said user as well as a said public key of said user,
9 (ii) said digital certificate also including a binding between at least a
10 portion of said financial account datum and said public key of said
11 user using a cryptographic verification key associated with a
12 trusted party performing said binding;

13 (b) verifying said binding using a said cryptographic verification key or a key
14 associated with said cryptographic verification key associated with a trusted party performing
15 said binding, thereby verifying said public key was bound using said cryptographic verification
16 key by said trusted party that performed said binding; and

17 (c) using said financial account datum to authorize a said transaction order
18 digitally signed by said user with a said private key corresponding to said public key.

1 3. (Previously Presented) The method of claim 2 where said digital
2 certificate constitutes said binding.

1 4. (Previously Presented) The method of claim 2 where said binding is
2 embedded in said digital certificate.

1 5. (Previously Presented) The method of claim 2 where said financial
2 account datum includes a credit card number.

1 6. (Previously Presented) The method of claim 2 where said financial
2 account datum includes a debit card number.

1 7. (Previously Presented) The method of claim 2 where said financial
2 account datum includes a PIN.

1 8. (Previously Presented) The method of claim 2 where said financial
2 account datum includes a card verification value 2.

1 9. (Previously Presented) The method of claim 2 where said financial
2 account datum includes checking account information.

1 10. (Previously Presented) The method of claim 2 where said binding is
2 performed with a symmetric key shared between said trusted party and a party performing said
3 verification step.

1 11. (Currently Amended) The method of claim 2 wherein said key associated
2 with said second verification key comprises an asymmetric key, where said binding is performed
3 with an said asymmetric key corresponding to said cryptographic verification key.

1 12. (Previously Presented) The method of claim 2 where said binding is
2 performed by an issuer of said digital certificate.

1 13. (Previously Presented) The method of claim 2 where said binding is
2 performed by an issuer of said financial accounting datum.

1 14. (Previously Presented) The method of claim 2 where said digital
2 certificate is protected with an access code known to said user.

1 15. (Currently Amended) A method for providing electronic payment
2 capabilities to a user in a networked computer environment, comprising the steps of:

- 3 (a) obtaining a financial account datum associated with said user;
4 (b) obtaining a public key associated with said user;
5 (c) obtaining a cryptographically assured binding of said public key to at least
6 a portion of said financial account datum using a cryptographic verification key associated with a
7 trusted party performing said binding,

8 (i) said financial account datum, said public key, and said binding
9 being included in a digital certificate for said user,
10 (ii) said digital certificate being usable by said user to conduct an
11 electronic transaction involving said financial account datum; and
12 (d) transmitting said digital certificate to said user, enabling said user to
13 conduct said electronic transaction involving (i) a merchant, and (ii) a transaction processor
14 capable of verifying said binding using a said cryptographic verification key or a key associated
15 with said cryptographic verification key associated with a trusted party performing said binding,
16 thereby verifying said public key was bound using said cryptographic verification key by said
17 trusted party that performed said binding.

1 16. (Previously Presented) The method of claim 15 where said digital
2 certificate constitutes said binding.

1 17. (Previously Presented) The method of claim 15 where said binding is
2 embedded in said digital certificate.

1 18. (Previously Presented) The method of claim 15 where said financial
2 account datum includes a credit card number.

1 19. (Previously Presented) The method of claim 15 where said financial
2 account datum includes a debit card number.

1 20. (Previously Presented) The method of claim 15 where said financial
2 account datum includes a PIN.

1 21. (Previously Presented) The method of claim 15 where said financial
2 account datum includes a card verification value 2.

1 22. (Previously Presented) The method of claim 15 where said financial
2 account datum includes checking account information.

1 23. (Previously Presented) The method of claim 15 where said binding is
2 performed with a symmetric key shared between said trusted party and said transaction
3 processor.

1 24. (Currently Amended) The method of claim 15 wherein said key associated
2 with said second verification key comprises an asymmetric key, where said binding is performed
3 with an ~~said~~ asymmetric key corresponding to said cryptographic verification key.

1 25. (Previously Presented) The method of claim 15 where said binding is
2 performed by an issuer of said digital certificate.

1 26. (Previously Presented) The method of claim 15 where said binding is
2 performed by an issuer of said financial account information.

1 27. (Previously Presented) The method of claim 15 further comprising the
2 step, after step (a), of verifying said financial account datum.

1 28. (Previously Presented) The method of claim 15 where said digital
2 certificate is protected with an access code known to said user.

1 29. (Previously Presented) The method of claim 15 where said digital
2 certificate is stored at a credential server accessible to said user.

1 30. (Currently Amended) An apparatus for authorizing an electronic purchase
2 in a networked computer environment, comprising:

- 3 (a) a computer processor;
- 4 (b) a memory connected to said processor storing a program to control the
5 operation of said processor;
- 6 (c) the processor operable with said program in said memory to:
- 7 (i) receive, from a merchant, a transaction authorization request, said
8 request including a digital certificate passed through said merchant

9 from a user involved in said transaction and a transaction order that
10 was digitally signed by said user using a private key associated
11 with a public key,

12 (1) said digital certificate including a financial account datum
13 associated with said user as well as a said public key of said
14 user,

15 (2) said digital certificate also including a binding between at
16 least a portion of said financial account datum and a public
17 key of said user using a cryptographic verification key
18 associated with a trusted party performing said binding;

19 (ii) verify said binding using a said cryptographic verification key or a
20 key associated with said cryptographic verification key associated
21 with a trusted party performing said binding, thereby verifying said
22 public key was bound using said cryptographic verification key by
23 said trusted party that performed said binding; and

24 (iii) use said financial account datum to authorize a transaction order
25 digitally signed by said user with a said private key corresponding
26 to said public key.

1 31. (Previously Presented) The apparatus of claim 30 where said financial
2 account datum includes a PIN.

1 32. (Previously Presented) The apparatus of claim 30 where said financial
2 account datum includes a card verification value 2.

1 33. (Previously Presented) The apparatus of claim 30 where said binding is
2 performed with an asymmetric key corresponding to said cryptographic verification key.

1 34. (Currently Amended) An apparatus for providing electronic payment
2 capabilities to a user in a networked computer environment, comprising:

3 (a) a processor;

4 (b) a memory connected to said processor storing a program to control the
5 operation of said processor;

6 (c) the processor operable with said program in said memory to:

7 (i) obtain a financial account datum regarding said user,

8 (ii) obtain a public key associated with said user,

9 (iii) obtain a cryptographically assured binding of said public key to at

10 least a portion of said financial account datum using a
11 cryptographic verification key associated with a trusted party
12 performing said binding,

13 (1) said financial account datum, said public key, and said
14 binding being included in a digital certificate for said user,

15 (2) said digital certificate being usable by said user to conduct
16 an electronic transaction involving said financial account
17 datum, and

18 (iv) transmit said digital certificate to said user, enabling said user to
19 conduct said electronic transaction involving (1) a merchant, and
20 (2) a transaction processor capable of verifying said binding using
21 a said cryptographic verification key or a key associated with said
22 cryptographic verification key associated with a trusted party
23 performing said binding, thereby verifying said public key was
24 bound using said cryptographic verification key by said trusted
25 party that performed said binding.

1 35. (Previously Presented) The apparatus of claim 34 where said financial
2 account datum includes a PIN.

1 36. (Previously Presented) The apparatus of claim 34 where said financial
2 account datum includes a card verification value 2.

1 37. (Previously Presented) The apparatus of claim 34 where said binding is
2 performed with an asymmetric key corresponding to said cryptographic verification key.

1 38. (Currently Amended) A computer-readable storage medium encoded with
2 processing instructions for implementing a method for authorizing an electronic purchase in a
3 networked computer environment, said processing instructions for directing a computer to
4 perform the steps of.

5 (a) receiving, from a merchant, a transaction authorization request, said
6 request including a digital certificate passed through said merchant from a user involved in said
7 transaction and a transaction order that was digitally signed by said user using a private key
8 associated with a public key,

9 (i) said digital certificate including a financial account datum
10 associated with said user as well as a public key of said user,
11 (ii) said digital certificate also including a binding between at least a
12 portion of said financial account datum and a public key of said
13 user using a cryptographic verification key associated with a
14 trusted party performing said binding;

15 (b) verifying said binding using a cryptographic verification key or a key
16 associated with said cryptographic verification key, thereby verifying said public key was bound
17 using said cryptographic verification key by said trusted party that performed said
18 binding associated with a trusted party performing said binding; and

19 (c) using said financial account datum to authorize ~~a~~ said transaction order
20 digitally signed by said user with ~~a~~ said private key corresponding to said public key.

1 39. (Previously Presented) The computer-readable medium of claim 38 where
2 said financial account datum includes a PIN.

1 40. (Previously Presented) The computer-readable medium of claim 38 where
2 said financial account datum includes a card verification value 2.

1 41. (Previously Presented) The computer-readable medium of claim 38 where
2 said binding is performed with an asymmetric key corresponding to said cryptographic
3 verification key.

1 42. (Currently Amended) A computer-readable storage medium encoded with
2 processing instructions for implementing a method for providing electronic payment capabilities
3 to a user in a networked computer environment, said processing instructions for directing a
4 computer to perform the steps of:

- 5 (a) obtaining a financial account datum regarding said user;
6 (b) obtaining a public key associated with said user;
7 (c) obtaining a cryptographically assured binding of said public key to at least
8 a portion of said financial account datum using a cryptographic verification key associated with a
9 trusted party performing said binding,
10 (i) said financial account datum, said public key, and said binding
11 being included in a digital certificate for said user,
12 (ii) said digital certificate being usable by said user to conduct an
13 electronic transaction involving said financial account datum; and
14 (d) transmitting said digital certificate to said user, enabling said user to
15 conduct said electronic transaction involving (i) a merchant, and (ii) a transaction processor
16 capable of verifying said binding using ~~a said cryptographic verification key~~ or a key associated
17 with said cryptographic verification key, thereby verifying said public key was bound using said
18 cryptographic verification key by said trusted party that performed said binding~~associated with a~~
19 ~~trusted party performing said binding.~~

1 43. (Previously Presented) The computer-readable medium of claim 42 where
2 said financial account datum includes a PIN.

1 44. (Previously Presented) The computer-readable medium of claim 42 where
2 said financial account datum includes a card verification value 2.

1 45. (Previously Presented) The computer-readable medium of claim 42 where
2 said binding is performed with an asymmetric key corresponding to said cryptographic
3 verification key.

1 46. (Currently Amended) A digital certificate for use in an electronic payment
2 transaction in a networked computer environment, comprising:

3 (a) a financial account datum associated with a user as well as a public key
4 associated with said user;

5 (b) a cryptographically assured binding of said public key associated with said
6 user to at least a portion of said financial account datum, said binding having been generated
7 with a cryptographic verification key associated with a trusted party performing said binding;

8 (c) said digital certificate configured for use by a transaction processor to:

9 (i) verify said binding using a said cryptographic verification key or a
10 key associated with said cryptographic verification key, thereby
11 verifying said public key was bound using said cryptographic
12 verification key by said trusted party that performed said
13 binding associated with said trusted party, and

14 (ii) access said financial account datum to authorize a transaction order
15 digitally signed with said user's private key corresponding to said
16 public key.

1 47. (Previously Presented) The digital certificate of claim 46 where said
2 digital certificate constitutes said binding.

1 48. (Previously Presented) The digital certificate of claim 46 where said
2 binding is embedded in said digital certificate.

1 49. (Previously Presented) The digital certificate of claim 46 where said
2 financial account datum includes a credit card number.

1 50. (Previously Presented) The digital certificate of claim 46 where said
2 financial account datum includes a debit card number.

1 51. (Previously Presented) The digital certificate of claim 46 where said
2 financial account datum includes a PIN.

1 52. (Previously Presented) The digital certificate of claim 46 where said
2 financial account datum includes a card verification value 2.

1 53. (Previously Presented) The digital certificate of claim 46 where said
2 financial account datum includes checking account information.

1 54. (Previously Presented) The digital certificate of claim 46 where said
2 binding is performed with a symmetric key shared between said trusted party and said
3 transaction processor.

1 55. (Currently Amended) The digital certificate of claim 46 wherein said key
2 associated with said second verification key comprises an asymmetric key, where said binding is
3 performed with an ~~said~~ asymmetric key corresponding to said cryptographic verification key.

1 56. (Previously Presented) The digital certificate of claim 46 where said
2 binding is performed by an issuer of said digital certificate.

1 57. (Previously Presented) The digital certificate of claim 46 where said
2 binding is performed by an issuer of said financial account datum.

1 58. (Previously Presented) The digital certificate of claim 46 where said
2 digital certificate is protected with an access code known to said user.

1 59. (Previously Presented) The method of claim 2 where at least a portion of
2 said financial account datum is kept confidential from said merchant.

1 60. (Previously Presented) The method of claim 15 where at least a portion of
2 said financial account datum is kept confidential from said merchant.

1 61. (Previously Presented) The method of claim 30 where at least a portion of
2 said financial account datum is kept confidential from said merchant.

1 62. (Previously Presented) The method of claim 34 where at least a portion of
2 said financial account datum is kept confidential from said merchant.

1 63. (Previously Presented) The method of claim 38 where at least a portion of
2 said financial account datum is kept confidential from said merchant.

1 64. (Previously Presented) The method of claim 42 where at least a portion of
2 said financial account datum is kept confidential from said merchant.

1 65. (Previously Presented) The method of claim 46 where at least a portion of
2 said financial account datum is kept confidential from said merchant.